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L4: Entry 2 of 5 File: USPT Jun 23, 1998

DOCUMENT-IDENTIFIER: US 5770447 A TITLE: Cell Line for the rapid expression of functional <u>calcium</u> channels

ABPL:

The instant invention provides a stable cell line, 34893 2L, for the rapid functional expression of high voltage activated calcium channels.

BSPR:

The voltage activated calcium channels of vertebrates have been shown to be involved in a variety of different physiological processes including muscle contraction, insulin release from the pancreas, and neurotransmitter release in the nervous system (Catterall W. A., Trends in Neurosciences, 1993;16:500-506; Catterall W., Epstein P. N., Diabetologia, 35(Suppl 2:S23-33) 1992; Birnbaumer L., et al., Neuron., 1994:13; Rorsman P., et al., Diabete. Metab., 1994;20:138-145). The original description of the calcium channels classed them as <u>T type.</u> L type, or N type. The <u>T type</u> channel is activated at relatively low voltages, while the L and N types are activated by depolarization to higher voltages. The L type is a channel that is involved in muscle contraction, and is characterized by slow inactivation and sensitivity to dihydropyridines. The N type is also a high voltage activated channel, but rather than being sensitive to dihydropyridines, the N channel is blocked by the peptide toxins GVIa and MVIIA from cone snails, and is involved in neurotransmitter release (Birnbaumer L., et al., Neuron., 1994:13; Olivera B. M., Miljanich G. P., Ramachandran J., Adams M. E., Annu Rev. Biochem., 1994;63:823-867).

BSPR:

The channels purified from neural tissue and skeletal muscle contain a number of different subunits. The L channel from skeletal muscle consists of a complex containing five subunits, alpha 1, alpha 2, beta, delta, and gamma. L channels isolated from neuronal tissue consist of three subunits corresponding to the alpha 1, alpha 2, and beta subunits. Delta and gamma do not seem to be expressed in the nervous system (Catterall W. A., Trends in Neurosciences, 1993;16:500-506).

BSPR:

The N type channel is expressed primarily in neuronal tissue, though there have been some reports of the channel being expressed in beta cells of the pancreas. The N channel is also

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Term	Documents
ALPHA1.DWPI,TDBD,EPAB,JPAB,USPT.	1004
ALPHA1S	0
ALPHA.DWPI,TDBD,EPAB,JPAB,USPT.	450654
ALPHAS.DWPI,TDBD,EPAB,JPAB,USPT.	311
"1".DWPI,TDBD,EPAB,JPAB,USPT.	15934045
1S.DWPI,TDBD,EPAB,JPAB,USPT.	10580
ALPHA-1.DWPI,TDBD,EPAB,JPAB,USPT.	1546
ALPHA-1S	0
(2 AND ((ALPHA1 OR ALPHA-1) OR (ALPHA ADJ "1"))).USPT,JPAB,EPAB,DWPI,TDBD.	5

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Display	20	Documents	starting with Docum	ent: 5

Display Format: CIT Change Format

DERWENT-ACC-NO: 2000-271475

DERWENT-WEEK: 200034

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TITLE: Novel nucleic acids encoding pancreatic <u>T-type calcium</u> channels used for regulation of <u>T-type calcium channels</u> and

treatment of type II diabetes

INVENTOR: LI, M

PRIORITY-DATA: 1999US-0117399 (January 27, 1999),

1998US-0098004 (August 26, 1998)

PATENT-FAMILY:

PUB-NO PUB-DATE LANGUAGE PAGES MAIN-IPC
AU 9960217 A April 3, 2000 N/A 000 C12Q001/68
WO 200015845 A1 March 23, 2000 E 124 C12Q001/68

INT-CL (IPC): C07H 21/04; C07K 14/435; C07K 14/705; C12N 15/12; C12Q 1/68

Full Title Citation Front Review Classification Date Reference Claims KMC Draw Desc. Clip Img Image

5. Document ID: EP 1042468 A2, WO 9928342 A2, AU 9918026 A

L4: Entry 5 of 5

File: DWPI

Oct 11, 2000

DERWENT-ACC-NO: 1999-371096

DERWENT-WEEK: 200052

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TITLE: Subunits of calcium channels

INVENTOR: HARPOLD, M; STAUDERMAN, K; WILLIAMS, M; HANS, M;

URRUTIA, A ; WASHBURN, M S

PRIORITY-DATA: 1998US-0188932 (November 10, 1998),

1997US-0984709 (December 3, 1997)

PATENT-FAMILY:

PUB-NO · PUB-DATE LANGUAGE PAGES MAIN-IPC
EP 1042468 A2 October 11, 2000 E 000 C12N015/12
WO 9928342 A2 June 10, 1999 E 169 C07K014/00
AU 9918026 A June 16, 1999 N/A 000 C07K014/00

INT-CL (IPC): C07K 14/00; C07K 14/705; C07K 16/28; C12N 5/10; C12N 15/12; G01N 33/68

Full Title Citation Front Review Classification Date Reference Claims KWC Draw Desc Image

US-PAT-NO: 5770447

DOCUMENT-IDENTIFIER: US 5770447 A

TITLE: Cell Line for the rapid expression of functional calcium

channels

DATE-ISSUED: June 23, 1998

INVENTOR-INFORMATION:

NAME CITY STATE ZIP CODE COUNTRY

Offord; James David Ann Arbor MI N/A N/A

US-CL-CURRENT: 435/369; 435/7.1, 435/7.21

Full Title Citation Front Review Classification Date Reference Claims KMC Draw Desc Image

3. Document ID: US 5712158 A

L4: Entry 3 of 5 File: USPT

Jan 27, 1998

US-PAT-NO: 5712158

DOCUMENT-IDENTIFIER: US 5712158 A

TITLE: Cell line for the rapid expression of functional calcium

channels

DATE-ISSUED: January 27, 1998

INVENTOR-INFORMATION:

NAME CITY STATE ZIP CODE COUNTRY

Offord; James David Ann Arbor MI N/A N/A

US-CL-CURRENT: 435/369; 435/69.1

Full Title Citation Front Review Classification Date Reference Claims KMC Draw Desc Image

4. Document ID: AU 9960217 A, WO 200015845 A1

L4: Entry 4 of 5 File: DWPI

Apr 3, 2000